FLEET MANAGMENT

Managing fleet energy costs while lowering carbon emissions

Changes are afoot in the world of road freight – and last-mile delivery vehicles are obvious targets for decarbonisation. *Christopher Burghardt* looks at how companies can make the most of the green transition.

COVID-19 has forced people around the world to change their fundamental routines and adapt to a new normal. The pandemic has impacted every industry and every sector – almost without exception. The delivery fleet business, for instance, has had to expand its operating capacity as online shopping boomed under lockdown.

Younger generations of 'digital natives' are not the prime digital consumers anymore. To keep up with the widespread uptick in demand, delivery companies need to be flexible and agile, implementing changes quickly and without hesitation. Fleets must imagine new ways to deliver – perhaps with smaller vans, bikes or additional hired rental vehicles.

Where new 'disruptors' in the market are leading the way, larger companies such as UPS and DHL are falling behind. To keep up in this rapidly evolving world, delivery services and fleets should streamline their operations and facilitate increased cooperation. Anticipating change is key to adapting and, ultimately, surviving within the industry. This is why businesses must accept the critical role they play in ensuring a green recovery – and view post-COVID expansion plans as an opportunity to invest in electric vehicle (EV) options.

Low cost, low emissions

Last summer, the Committee on Climate Change (CCC) reinforced its view that the mass adoption of EVs is part of the 'least-cost pathway' toward achieving net zero greenhouse gas (GHG) emissions by 2050. This electric revolution is accepted to be approaching at speed, with forecasts from 2020 predicting that EV sales would surpass internal-combustion-engine (ICE) vehicle sales by 2030. This figure is now certain to be surpassed, given that the government has banned sales of petrol and diesel vehicles by that date.

Smart charging offers flexibility benefits
Photo: ChargePoint

Some of the major players within the road freight market are taking heed. Amazon and DPD have announced that they will both be moving towards an electric delivery fleet as part of their climate pledges. Of course, such large, influential companies are not doing this purely for altruistic reasons. Going electric allows for businesses to reach decarbonisation goals – and does so while bringing down the overall cost of transport.

As prices continue to fall, battery electric vehicles (BEVs) are expected to reach cost parity with ICE vehicles within the next few years. But upfront expenditure is just one consideration, as the real costs of BEVs are often lower due to generous government subsidies for both the cars and the necessary charging infrastructure. Thanks to fewer moving parts – around 20 as opposed to more than 2,000 for an ICE vehicle – EVs also have far lower maintenance costs, as well as better resale value.

If that's not enough, there's another way organisations can save with zero emission vehicles: taxes. BEVs are exempt from the Vehicle Excise Duty (VED), as well as the benefit-in-kind (BIK or 'company car') tax. All told, the cost savings of an EV versus an ICE vehicle can be considerable.

Post-pandemic streamlining

A major challenge within the industry is there are 'too many cooks in the kitchen', all of whom are key decision makers. These include fleet managers, CSR heads, depot managers and energy managers, as well as city planners and government officials who play a key role in deciding how fleet networks can be expanded. It is imperative to streamline this so that decisions and strategies can be implemented faster to keep up with rapidly changing consumer demand.

But for the process to be more efficient, those within it need to be convinced of the way forward. The key to this is including all interested parties in the process as early as possible.

Energy managers should be brought into the fleet team first to help plan out the charging infrastructure. Many depots have more constraining electric grid connections or are closer to full capacity than first thought. Ensuring that energy managers are included early, and that the right

solution is chosen, is key to simplifying the electrification process.

For most fleet solutions, smart charging is the only rational option. Through smart charging, charging stations may monitor, manage, and restrict the use of charging devices to optimise energy consumption, thus actively and passively managing spikes in demand. For example, whole networks or individual depots can lower charging rates during peak times or create an artificial peak by charging numerous vehicles at their maximum rate simultaneously. Therefore, they contribute to increase the share of renewable power intake in the energy system.

Whilst smart charging may represent an investment upfront, it offers invaluable benefits. A larger number of vehicles can charge simultaneously without the need for costly grid upgrades and leverage cheaper electricity tariffs when dynamic pricing is in place. Networked EV charging solutions also offer the ability to monitor real-time energy use, control costs by setting a power ceiling to avoid demand charges and even install more EV charging stations, so that additional cars can charge through power management.

For depot and fleet managers, ensuring uptime is crucial and the thought of reinventing the wheel through electrification can be the stuff of nightmares. For fleets, even an afternoon of downtime in infrastructure can be devastating for client relationships and profitability. So how do you ensure that downtime is avoided?

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Advances in fleet management software and its integration within charging infrastructure can offer an answer. Smart charging allows for fleet managers or their existing software to allocate vehicles online, see what vehicles are available for their desired time slots and distribute the vehicles (dependent on charge, route length or a whole host of variables) to ensure that all routes can be covered.

Fleet managers can also rest easy knowing that should a longer journey than planned take place or a vehicle be delayed, the system can manage these uncertainties and assure vehicles are made available.

These systems also integrate to allow depot managers to know exactly where each vehicle should be charged and for how long. This allows for each vehicle to receive the right amount of charge without having to match vehicle to charger numbers one-to-one, saving on hardware, grid connection and running costs, as outlined above.

In my experience, the companies that have had the smoothest transitions are not necessarily those which have tried to side-step certain departments or managers, but those which clearly explain why and how the process is going to work as early as possible. It can take time to change the viewpoints of professionals who may have spent an entire career slowly perfecting their ICE fleet.

Ensuring departments, such as energy, that may have had little contribution to your fleet previously, are integrated into the team early and effectively is key to helping electrification progress quickly and smoothly.

The way that governments, businesses and individuals respond in the coming months will have a lasting impact on economies, health and the environment for generations to come. To meet consumer demands for a cleaner future – and to take advantage of the long-term savings that EVs offer – businesses need to accept and embrace the benefits of a green recovery. ●

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